

REMARKS/ARGUMENTS

35 U.S.C. §103 Rejections

The Office Action has rejected claims 1-13, 21-22 and 24-30 under 35 U.S.C. §103(a) as being unpatentable over the cited portions of U.S. Patent No. 6,990,676 to Proehl et al. (hereinafter "Proehl") in view of the cited portions of U.S. Patent No. 5,530,754 to Garfinkle (hereinafter "Garfinkle"). Applicants reiterate their believe that Proehl and Garfinkle do not, either alone or in combination, teach or suggest the invention in the claims. More specifically, none of Proehl or Garfinkle teach or suggest: "storing the first portion of a linearly scheduled program at the user location before detecting a user request for the linearly scheduled program that initiates transmit/receipt of a second portion of the linearly scheduled program", as generally required by the claims. Reconsideration is respectfully requested.

Reason to Combine Garfinkle and Proehl Nonsensical: Signal Delay

In the Response to Arguments section of the Office Action, dated June 26, 2008, the Final Office Action contends that: "one of ordinary skill in the art would have been motivated to combine the lead-in technique of Garfinkle, with the pre-storing of short video clips of Proehl, at least for the benefit of allowing the customer an immediate start to a selected program, which overcomes possible transmission delays". See, *Final Office Action*, at page 2, line 18 to page 3, lines 1-4. The Final Office Action further goes on to state that: "all video transmission systems are inherently susceptible to any number of technical problems that may cause a delay in the reception of a requested linearly scheduled broadcast" (*Final Office Action* at page 3, lines 6-8).

Applicants assert that all the technical problems that may inherently cause a delay in the reception of the requested linearly scheduled programs (from the headend to the user's terminal equipment) are invisible to the end user customer. It is widely understood that a linearly scheduled program provides predetermined programming according to a predetermined schedule at any time and thus by definition does not suffer from any perceived latency. Indeed,

even if it took light years for the signal to arrive, tuning to the channel would instantly display the program despite the light years of travel.

Stated another way, Applicants believe such a combination is not sufficiently motivated because linearly scheduled programs are really defined by their uniform lack of perceived latency such that use of Garfinkle's lead-in technique to reduce latency solves a problem that is not present in linearly scheduled programs.

Reason to Combine Garfinkle and Proehl Nonsensical: Linearly Scheduled Channel Interruption

In addition, in the Response to Arguments section of the Office Action, dated June 26, 2008, the Final Office Action takes the position that: "one of ordinary skill in the art would have been motivated to combine the lead-in technique of Garfinkle, with the pre-storing of short video clips of Proehl to overcome a possible disruption problem that may occur in the satellite TV systems due to inclement weather or in the cable systems due to dysfunction of components between a CATV and subscriber." *See, Final Office Action*, at pp. 3, lines 8-16.

Applicants respectfully submit that the above motivation to combine Garfinkle with Proehl to overcome a possible program disruption also does not make sense. To overcome program disruption problem for all channels, Applicants presume that the proposed combination would buffer some portion of linearly scheduled channels at the user location by transmitting the buffer portion in advance of linear playback using a back-channel. This presumably is the system the Office Action contemplates as it would have a buffered portion for each linear program pre-stored to anticipate a possible interruption. Buffering a single channel would not be enough for this proposed combination as a hallmark of linearly scheduled programming is the ability to channel surf to any program at any moment. If 10 minutes were buffered, a viewer can change channels in an instant to any channel so all channels would require buffering.

Storing of that order of linearly scheduled programming at the end user location and the bandwidth delivery effort would not make sense to anyone of ordinary skill in the art when posed with these references at the time Applicants filed their application. Applicants posit that at the time this application was filed, the capacity and transfer performance of mass storage

devices would not be enough to store a lead-in segment for every linearly scheduled program on every channel.

Considering an example from Proehl system having an end user with a subscription level of about 143 TV channels (FIG. 16 of Proehl). Assuming that at the time Proehl application was filed all the channels were standard-definition television (SDTV), which might be delivered at a data rate of around 4 Mb/s for each of the 143 channels of MPEG2 encapsulated video. In this case, the minimum bandwidth requirement to deliver linearly scheduled programs to the end user location would be at least about 500 Mb/s to have a lead-in portion pre-stored for each channel. The undersigned would have loved to have an Internet connection of that speed when this application was filed, but sadly could get no more than a 5 Mb/s connection at my residence. This technical limitation makes the suggested combination improper.

In addition, the hard drives in set top boxes at the time were not capable of storing information in sustained transfer rates as would be required by the Garfinkle/Proehl combination. If memory serves, sustained transfer rates for hard drives at the time were more like 10 Mb/s (see: <http://www.storagereview.com/map/lm.cgi/str>). The Garfinkle/Proehl combination would require storage systems that were an order of magnitude too slow at the time of the invention as 500 Mb/s would be required on the back-channel to allow buffering of a lead-in for each channel.

Taking into account the bandwidth delivery rate for the Internet and the transfer performance rate of mass storage devices were not practical at the time this application was filed, the thought to combine Garfinkle and Proehl would not have occurred to one of ordinary skill in the art at the time of the invention. The combination is improper.

Logical Garfinkle/Proehl Combination Does not Teach or Suggest Claimed Invention

Furthermore, in the Response to Arguments section of the Office Action, the second and third paragraphs of the Final Office Action on page 4 asserts that one of ordinary skill in the art could have applied the known "improvement" technique of Garfinkle, namely

storing the lead-in segment of certain VOD programs, in the same way to the "base" device of Proehl, namely consumer's TV receiving equipment, which is used for storing video clips related to linearly scheduled programs, and the results would have been predictable to one of ordinary skill in the art. That means, one of ordinary skill in the art would expect to achieve a result of pre-storing beginning portions of linearly scheduled broadcast programs so that the consumer would receive the instant beginning portion of a requested movie from the locally stored memory, and the remaining portion delivered by the headend.

Applicants respectfully believe a combination of Garfinkle and Proehl would not even achieve the claimed invention if attempted. TV interfaces keep linear programming segmented from VOD. Navigation of these different services is mutually exclusive in program guides, and any attempt to mix these would be confusing to consumers. A VOD innovation like Garfinkle would not be introduced into the linearly scheduled programming innovation of Proehl. Beyond being impossible to implement, there is only one logical way to combine these references. To wit, the combination of Garfinkle and Proehl would merely result in a set top box that has low-latency VOD in one section of the interface like Garfinkle and linearly scheduled program guide with preview videos in a separate portion of the program guide like Proehl. There is no legitimate reason why the lead-in VOD technology would be integrated into the linearly scheduled program service. Mixing and matching of some VOD features and some linearly scheduled program features cannot be done without specific reasons for these substitutions that make sense. Reconsideration is respectfully requested.

In summary, the only way to combine Garfinkle and Proehl would be to use impermissible hindsight reconstruction where our claims are used as a template. The prior art simply cannot be used as a guide in this circumstance.

Secondary Considerations

In one embodiment, the present invention is able to convert near video on demand (NVOD) systems typically used in satellite TV systems into a VOD experience. NVOD service offered by satellite broadcasters suffers from a waiting period before viewing can begin. Cable

companies have relentlessly criticized satellite TV's lack of true VOD in their advertizing. This invention fulfills this long-felt need to allow satellite TV companies to offer a VOD-like product with immediate viewing without significant delay. Attached as Appendixes A & B are articles that describe some of the industry issues with satellite not being able to compete with cable because of the lack of a VOD offering.

Summary

It is for at least these reasons that Applicants respectfully request reconsideration of the rejection to the claims.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

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